

Test Yourself Chapter 5 **Statistics and society** Name: _____

All Multiple Choice

- | | |
|--|---|
| <p>1 For which of the following would the data source be internal? B</p> <p>A Researching the most sold make of car in Australia</p> <p>B Researching the most popular TV program among the 15–18 year old age bracket</p> <p>C Researching the voting pattern at the last state election</p> <p>D Researching the daily share price of a particular stock</p>
<p>2 For which of the following would the data source be external? A</p> <p>A Researching the most played song on radio</p> <p>B Researching the most popular music group among the 15–18 year old age bracket</p> <p>C Researching people's voting intentions at the next state election</p> <p>D Researching the number of people who own shares</p>
<p>3 For which of the following would the data be obtained by questioning? B</p> <p>A Researching the number of speeding tickets issued on local roads during the Christmas holidays</p> <p>B Researching the number of speeding tickets each licensed driver has received in the last five years</p> <p>C Researching the number of unpaid speeding fines issued over the last five years</p> <p>D Researching the changes in speed limits on local roads over the past five years</p> | <p>4 For which of the following would the data be obtained by observation? A</p> <p>A Researching the crowds that attend football matches of each team</p> <p>B Researching which football team has the most people claiming to be supporters</p> <p>C Researching which football team has the most popular players in their team</p> <p>D Researching which football team has the home ground that most people like to attend</p>
<p>5 Which of the following is <i>not</i> an example of an open-ended question? D</p> <p>A What is your favourite colour?</p> <p>B How many times have you travelled overseas?</p> <p>C When do you intend to sit for your driver's license test?</p> <p>D Do you intend to finish Year 12 at school?</p> |
|--|---|

Questions 6 and 7 refer to the table below.

Score	Frequency
3	2
4	1
5	7
6	9

- 6 The most frequent score is: D
- A 2
B 3
C 5
D 6

- 7 The frequency of the lowest score is: A
- A 2
B 3
C 4
D 5

- 8 Twenty people were asked to rate a television show out of 5. These ratings are given below. C
- 0, 1, 1, 2, 4, 2, 2, 3, 1, 0,
3, 2, 1, 3, 4, 4, 5, 5, 2, 1.
- A table is displayed for this data.

Score	Frequency
0	2
1	
2	5
3	3
4	3
5	2

The missing number is:

- A 3
B 4
C 5
D 6

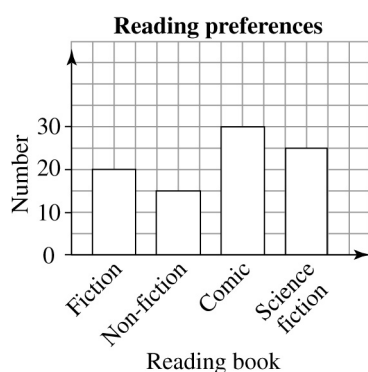
Questions 9 and 10 refer to the data below.

The data shows the number of car accidents at a particular intersection each year.

No. of accidents	Frequency
0–9	4
10–19	5
20–29	8
30–39	3

- 9 For how many years have records been kept? B
- A 4
B 20
C 30
D 35
- 10 The highest number of accidents recorded in a year could have been: C
- A 8
B 29
C 35
D 40

Questions 11 and 12 refer to the following graph.

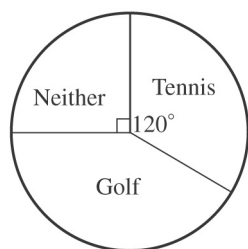


- 11 The favourite type of reading book is: **C**
- A fiction
 - B non-fiction
 - C comic
 - D science fiction.

- 12 The number of people surveyed is: **C**
- A 40
 - B 60
 - C 90
 - D 100

Questions 13 and 14 refer to the graph below.

Sports played by Year 8 students



- 13 The angle that represents the proportion of people who play golf should be: **D**
- A 90°
 - B 120°
 - C 135°
 - D 150°

- 14 If there are 216 students in Year 8 how many students play golf? **B**
- A 72
 - B 90
 - C 144
 - D 150

- 15 Of 5000 cars sold it is found that 92 have mechanical trouble that needs attention under warranty in the first year. **A**
The percentage of cars needing attention under warranty in the first year is:
- A 1.84%
 - B 9.2%
 - C 18.4%
 - D 46%

- 16 The thickness of a certain brand of tyre is given as being 14 mm. **A**
A batch of tyres is tested and must pass the following two conditions before they can be sold.
Condition 1:
No more than 2.5% of tyres are to have a thickness of less than 13 mm.
Condition 2:
No more than 5% of tyres are to have a thickness of more than 15 mm.
Of 450 tyres tested it is found that 9 tyres have a thickness less than 13 mm and 23 tyres have a thickness greater than 15 mm.
The batch of tyres will:
- A pass condition 1 only
 - B pass condition 2 only
 - C pass both conditions
 - D pass neither condition.

The information below is to be used to answer questions 16 to 20.

A batch of batteries is tested for their life span in hours. The results are shown in the table below.

Life of battery	Frequency
0–9	3
10–19	30
20–29	25
30–39	102
40–49	75
50 and over	15

- 17 The makers claim the batteries have an expected life span of between 30 and 49 hours. **C**

The percentage of batteries that have a life span meeting the manufacturers claim is:

- A 30%
- B 40.8%
- C 70.8%
- D 73.5%

- 18 This batch of batteries is considered faulty if: **B**

Condition 1:

More than 15% of the batch has a life less than 20 hours.

Condition 2:

More than 5% have a life span of 50 hours or more.

The batteries from the batch represented by the table above:

- A fail condition 1 only
- B fail condition 2 only
- C fail neither condition
- D fail both conditions.

- 19 The manufacturer offers a money back guarantee. The manufacturer does not want to have to refund more than 5% of all purchases. **B**

The maximum number of hours that he can guarantee is:

- A 5 hours
- B 9 hours
- C 15 hours
- D 20 hours

- 20 The manufacturer wants to make sure that at least 85% of all batteries have a life span of at least 30 hours. **B**

This batch of batteries has:

- A failed to reach this target by more than 10%
- B failed to reach this target by less than 10%
- C reached this target by less than 10%
- D reached this target by more than 10%.